UNIVERSITI TEKNOLOGI MARA

TECHNICAL ANALYSIS EFFICIENCY ENHANCEMENT IN MOVING AVERAGE INDICATOR THROUGH ARTIFICIAL NEURAL NETWORK

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Thesis submitted in fulfilment
of the requirements for the degree of
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CONFIRMATION BY PANEL OF EXAMINERS

I certify that a Panel of Examiners has met on 7th February 2017 to conduct the final examination of Muhamad Sukor bin Jaafar on his Doctor of Philosophy thesis entitled "Technical Analysis Efficiency Enhancement in Moving Average Indicator Through Artificial Neural Network" in accordance with Universiti Teknologi MARA Act 1976 (Akta 173), The Panel of Examiners recommends that the student be awarded the relevant degree. The panel of Examiners was as follows:

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ABSTRACT

The technical approach to investment is essentially a reflection of the idea that prices move in trends which are determined by the changing attitudes of investors toward a variety of economy, monetary, political and psychological forces (Pring, 2001). The response of stock prices toward the changes in economic variables vary from one to another hence, it makes trading decision to be very complex (Darie et. al., 2011). Efficiency refers to the ability to produce an acceptable level of output using cost-minimizing input ratios (Farrel, 1957). Thus, in technical analysis, efficiency refers to the ability of the indicators to indicate a good timing of entry and out of the market with profit. And levels of efficiencies are showed by actual output ratios versus expected output ratios (Shao and Lin, 2001). The higher the actual output ratios against the expected output ratios, the higher the efficiency level of the indicators. This research investigates several technical indicator and found none of the indicators reached the efficiency level. To improve the level, this study apply the Artificial Neural Network model that capable to learn the price and the moving average pattern and suggest a new pattern better than the previous one in term of efficiency. This research found that the improvements are not just to the efficiency but also increase number of trading as per selected period hence increase the changes of investor to enter and exit from the market with possibility of a better profit as compared to traditional technical analysis.

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